

Remarks

Claims 1-8 are pending in the application. The specification has been amended. Claims 1, 2, and 8 have been amended. Claim 7 has been cancelled. New claims 9-10 have been added. Reconsideration of the application is respectfully requested for the reasons set forth herein.

1. In the Office Action dated June 12, 2002, the Examiner objected to the disclosure because of an informality. The Examiner stated that on page 4, line 8, a reference to "short sides 9" and "long sides 7" is made. The Examiner further stated that throughout the specification and drawings reference numeral 7 identified the short sides and reference numeral 9 identified the long sides. Although Applicant previously disagreed with this objection, upon further review of the disclosure, the Applicant agrees with the Examiner. Page 4, lines 6-9, therefore, has been amended as follows: "In the embodiment example illustrated by Figures 2, 3, and 4, the frame 19, of 16/9 format, comprises a pair of long sides 9 and a pair of short sides 7." The Applicant invites the Examiner to contact the Applicant in regard to this discrepancy if necessary.

2. The Examiner has rejected claims 1-3 and 5-8 under 35 U.S.C. 102(e) as being anticipated by Lakshmanan et al. (U.S. Patent No. 5,982,085).

With regard to claim 1, the Examiner stated that Lakshmanan discloses in Figure 1 a color cathode-ray tube comprising a glass front faceplate 15, a screen of luminescent materials 18, a color-selection mask 22, and a frame 25 to which the mask is fixed. The frame is substantially rectangular in shape and is defined by a pair of opposed long sides 33 and a pair of opposed short sides 36, including an edge 26 in the form of a metal part substantially parallel to the surface of the mask. The frame/mask assembly is held within the faceplate by support means

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engaging pins 14. Said means incorporate a metal piece including a first portion 27 extending over one of the surfaces of the said metal part and a second portion 40 extending in a direction substantially perpendicular to the surface of the mask. The metal piece being made of stainless steel and the frame being made of low carbon steel. The Examiner, therefore, concluded that Lakshmanan et al. discloses all of the claim limitations of claim 1.

Claim 1 has also been amended for clarity and to state that the support means comprises a metal piece including a first portion secured by welding to the metal part, said first portion attached opposite a surface of the mask and extending in a direction parallel to the tension direction of the mask, and a second portion extending in a direction substantially perpendicular to the first portion for securing the frame to the glass faceplate, said metal piece and said support means having coefficients of thermal expansion that cause the sides having the first portion to deform when heated such that ends of the sides not having the first portion approach each other to reduce the tension in the mask during heating. Lakshmanan et al. teaches an apertured shadow mask 22 welded to all four sides of a supporting frame 25. The supporting frame 25 includes four corner brackets 26 welded to diaphragms 33, 36 of the frame 25 to form a rectangle. Resilient plates 40 are welded to the corner brackets 26 to fix the frame 25 to a skirt of the cathode ray tube. Unlike the claimed invention, the corner bracket 26 neither extends in a direction parallel to a tension direction of the mask nor is positioned so that the sides parallel to the tension direction deform such that ends of the sides not having the first portion approach each other to de-tension the mask. Because Lakshmanan et al. does not teach all of the elements of amended claim 1, removal of the rejection of claim 1 under 35 U.S.C. 102(e) is respectfully requested.

Claims 2-3, 5-8 depend from claim 1. Claim 7 has been cancelled from the application for containing subject matter now contained in amended claim 1. Claim 2 has been amended to clarify that which the applicant regards as the invention. Claim 8 has been amended to correct a typographical error. As previously discussed, Lakshmanan does not teach all of the claim limitations of amended claim 1. Because Lakshmanan does not teach all of the claim limitations of amended claim 1, Lakshmanan does not teach all of the claim limitations of dependant claims 2-3, 5-6, and 8. Removal of the rejection of claims 2-3, 5-6, and 8 under 35 U.S.C. 102(a) is respectfully requested.

3. The Examiner has rejected claims 3 and 4 under 35 U.S.C. 103(a) over Lakshmanan et al. (U.S. Patent No. 5,982,085) in view of Sakata et al. (U.S. Patent No. 5,214,349).

With regard to claim 3, the Examiner stated that Lakshmanan et al. discloses all of the claim limitations of claim 3 as previously discussed with regard to claim 1, except "the mask being held under tension between the long sides of the frame." The Examiner further stated that Sakata et al. discloses a CRT comprising a color selection mask 11 and a frame of a substantially rectangular shape. The mask/frame assembly being held within the faceplate by support means engaging pins 26. Tension is applied between the long sides of the frame. This tension contributes to the prevention of the resonance of the filaments 11 with an external vibration, thereby producing a high-definition picture. The Examiner, therefore, concluded that it would have been obvious to anyone of ordinary skill in the art at the time the invention was made to use Sakata et al.'s teaching to modify the frame/shadow assembly of Lakshmanan et al. to apply a tension at the long opposite sides, since Sakata et al. teaches that this tension contributes to the

prevention of the resonance of the mask with an external vibration, thereby producing a high-definition picture.

Claim 3 depends from amended claim 1. As previously discussed, Lakshmanan does not teach all of the elements of claim 1. Because Lakshmanan does not teach all of the elements of claim 1, except the mask being held under tension between the long sides of the frame, the combination of Lakshmanan in view of Sakata et al. does not teach or suggest all of the claim limitations of claim 3. Removal of the rejection of claim 3 under 35 U.S.C. 103(a) is respectfully requested.

With regard to claim 4, the Examiner stated that Lakshmanan et al. discloses all of the claim limitations of claim 4 as previously discussed with regard to claim 1, except "the sides including an edge in the form of a metal part substantially parallel to the surface of the mask being the short sides of the frame." In the same field of endeavor, however, Sakata et al. teaches the equivalence of placing the support pins at the corners or arranging them toward the inner part of the panel in the vicinity of the corner portion, as shown in Figures 27-29. In Figure 29, the support pins are placed on the short sides of the faceplate. The Examiner, therefore, concluded that it would have been obvious to anyone of ordinary skill in the art at the time the invention was made to use Sakata et al.'s teaching to modify the frame/shadow assembly of Lakshmanan et al. since Sakata et al. teaches that it is equivalent to place the support pins at the corners or arrange them toward the inner part of the panel in the vicinity of the corner portion.

Claim 4 depends from amended claim 1. As previously discussed, Lakshmanan does not teach all of the elements of claim 1. Because Lakshmanan does not teach all of the elements of claim 1, except the sides including an edge in the form of a metal part being substantially parallel to the surface of the mask being the short sides, the combination of Lakshmanan in view of

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Sakata et al. does not teach or suggest all of the claim limitations of claim 4. Removal of the rejection of claim 4 under 35 U.S.C. 103(a) is respectfully requested.

4. New claims 9 and 10 have been added to the application.

Claim 9 is considered to be in condition for allowance because the prior art fails to teach or suggest all of the limitations of amended claim 1, the base claim of claim 9, for the reasons set forth herein and, additionally, the prior art fails to teach or suggest two opposing sides of the frame each having two supporting means attached thereto, the first portions of the supporting means covering about forty percent of each of the sides of the frame.

Claim 10 is considered to be in condition for allowance because the prior art fails to teach or suggest all of the limitations of amended claim 1, the base claim of claim 10, for the reasons set forth herein and, additionally, the prior art fails to teach or suggest the frame being of one-piece construction such that the entire frame expands and contracts as one unit during heating.

Examination of new claims 9-10 is respectfully requested.

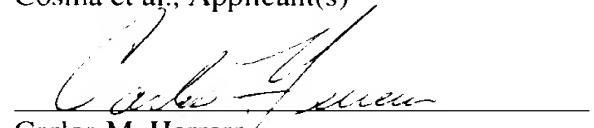
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In view of the arguments and amendments presented herein, the application is believed to be in condition for allowance. Reconsideration and passage to issue is respectfully requested.

Please charge and additional fees associated with this application to Deposit Order
Account Number 07-0832.

Respectfully submitted,

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